## **Defense Industrial Base Capability Study Series**

## Defense Acquisition Excellence Council

Miss Suzanne Patrick
DUSD (Industrial Policy)



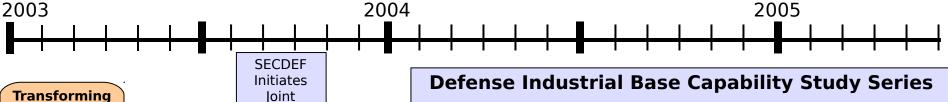
**April 13, 2004** 



## Defense Industrial Base Capability Study Series in

### Context

Capabilities



Transforming the Defense Industrial Base (02/03)

#### **FINDINGS**

- The Department should view industrial base as composed of operational effectsbased sectors
- From program justification through budgeting and acquisition, the Department should organize its decisionmaking processes to optimize operational effects
- The Department should analyze the results of a systematic assessment of critical technogy

requirement in each of these sectors.

Developme nt Process
(10/03)

CJCS Instruction Joint 3170.01C
Published

Joint Defense Capabilities Study (Aldridge) (12/03)

#### **PURPOSE**

(06/03)

- Established procedures to identify, assess, and prioritize joint military capability need
- Provided a construct for the Department's efforts to re-engineer corporate processes and unify focus on delivering warfighting capabilities
   Serves as the

cornerstone in realigning the Department's

Source: Philipping processes 3/16/04

Battlespac e Awareness (01/04) Command & Control (06/04)

Force Applicatio n (10/04) Protectio n (12/04) Focused Logistics (05/05)

SPG Released (03/04)

#### DEFENSE INDUSTRIAL BASE CAPABILITY STUDY (DIBCS) SERIES STUDY OBJ ECTIVES

Develop a capabilities-based industrial framework and analytical methodology as a foundation for programmatic and investment decision-making.

Identify technology critical to enabling the new I oint Staff functional warfighter capabilities. Establish a reference database of these key critical industrial base capabilities mapped to warfighting functional capabilities.

Conduct industrial base capability assessments on priority critical technologies to identify deficiencies.

Develop a systematic method to craft industrial base strategies to remedy industrial base deficiencies identified and encourage proactive, innovative management of the industrial base.



## DIBCS Methodology: Battlespace Awareness Example

### Identify U.S. Leadership Goals for Capabilities

Degree of Leadership Capability Neutral Equal Be Ahead Be Way Ahead Detect and locate Characterize Observe & Collect Detect airborne EM underground, manconventional Info World-Wide transmissions made structures explosions Integrate various Set the boundaries of Generate combatant Analysis of Gather and analyze sensor inputs to an adversary's position based on Intelligence Info population trends depict the EM sensor data battlespace Display analysis Manage Display raw imagery Manage operationally Recover signal from based on all source significant information noise environment Knowledge inputs Develop a model for Model, Simulate & predictive battlespace Forecast awareness

Decompose capabilities and identify functions to determine enabling technologies

2

Determine Enabling Technologies for Be Ahead/Be Way Ahead Capabilities

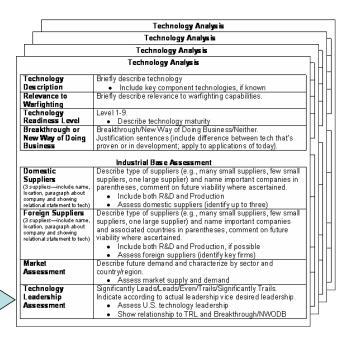
#### Critical Technology/ Industry List (270)

Long Wave Infrared Imaging
Active Hyperspectral Imager
Laser Interferometry
Active Electronically Scanned Array Radar
Maser Clocks
Ground Penetrating Radar
Lightweight, Broadband, Variable-Depth Sonar
Ultrasonic Imaging
Near Infrared Imaging
Miniature Atomic Clocks
Laser Induced Breakdown Spectroscopy
Polymerase Chain Reaction

Prioritize technologies to focus and scope assessments

3

Assess Industrial Base Capabilities for Each Critical Technology

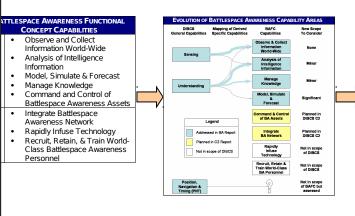


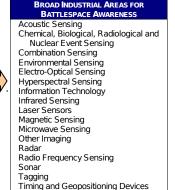
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Source: Booz Allen Hamilton and ODUSD(IP)

## The Defense Industrial Base Capability Study Series as a Lexicon: From Warfighting to Technology and Industrial Base Capabilities

#### **Operational Capability Framework**









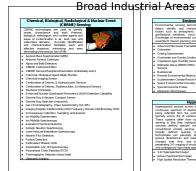


## Appendix A DIBCS Battlespace Awareness Capability Framework





## Appendix B Critical Technologies for Battlespace Awareness Organized by





#### Appendix C

A Compendium of Representative Defense Technology Suppliers with Transformational Capabilities

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# Functional Capabilities Applications in Defense Enterprise Strategies

Corporate Entity	Application	Utility
Government/Industry Program Managers	Decompose programs by functional capabilities/subsystems to assess applications for other platforms/ functions.	Facilitates cross- platform functional applications
Corporate Operating Groups and Military Services	Map operations by functional capabilities to better address customer needs and synergize corporate portfolio.	Provides benefits of functional view at corporate operating level and "common operating picture" across enterprise.
Corporations, the Defense Industrial Base, Defense Establishments, and supranational soமுகுற்குக்கு	Assess business strategies based on consolidated view of existing capabilities relative to required capabilities.	Ensures common language among senior decision makers throughout the defense enterprise, better anticipatory capabilities, and more seamless access to markets/ technology



## Crafting Defense Business Strategies by Functional Capability

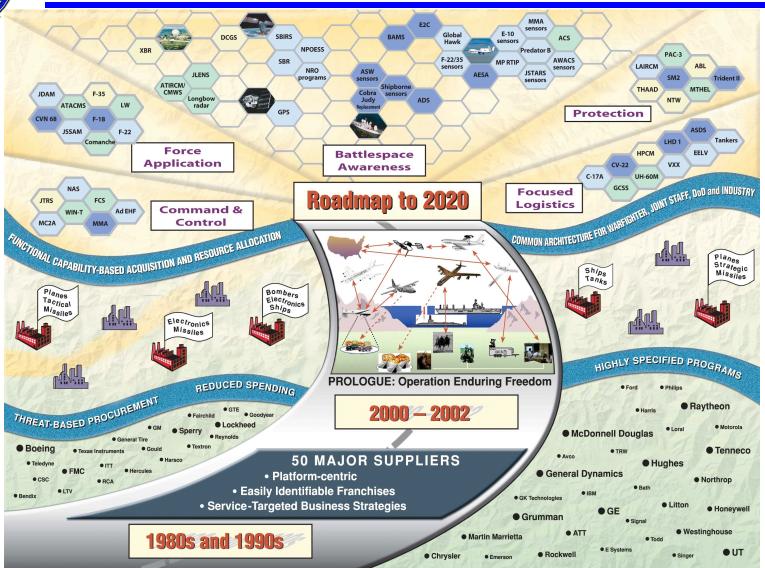
Actor	Objective	Process		
Emerging Defense Suppliers Global Defense Suppliers	Better access to U.S. Defense Industrial Base	<ul> <li>Map technologies by functional capabilities; overlay with U.S. functional capabilities.</li> <li>Assess which technology is/are gap fillers, innovate, or revolutionize existing capabilities.</li> <li>Develop business strategy targeting associated senior JCS/Department leadership, program managers, and companies.</li> </ul>		
Coalition Partners  Source: ODUSD(IP)	More effective coalition operations at less cost due to elimination of redundancy and optimizing capabilities	<ul> <li>Consolidate maps of military capabilities by functional areas.</li> <li>Assess gaps and overlaps relative to intended coalition missions.</li> <li>Rationalize outlays and harmonize requirements based on common operational objectives.</li> </ul>		



## Backup



Roadmap to the Future



3/\$0urce; Adapted from Transforming the Defense Industrial Base: A Roadmap, ODUSD(IP), February 6



## Joint Staff Functional Concepts

Battl	lespac	e Awar	reness
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Global Hawk, MPRTIP, NAS, Predator UAV (MQ9), NPOESS, SBIRS -High, Cobra Judy Replacement, -2 Advanced Hawkeye Capabilities of commanders and all force elements to understand the environment in which they operate and the adversaries they facelses a variety of surveillance capabilities to gather information, randomized becure netcentric environment to manage this information, and a collection of capabilities to analyze, understand and predict.

#### **Command and Control**

GBS, AEHF, FBCB2, JTRS, SMART-T, WIN-T, MCS, NESP

Capabilities that exercise a commander somity and direction over forces to accomplish a mission olves planning, directing, coordinating, and controlling forces and operations. Provides the means for a commander to recognize what is needed and ensure that appropriate actions are taken.

#### Force Application

AMRAAM, DDG 51,GMLRS, JDAM, JSOW, CVN 21, MM II,I SSGN Capabilities to engage adversaries with lethal and that methods across the entire spectrum of conflict ludes all battlefield movement and drotte offensive and defensive combat capabilities in land, sea, air, space, and information domains.

#### **Protection**

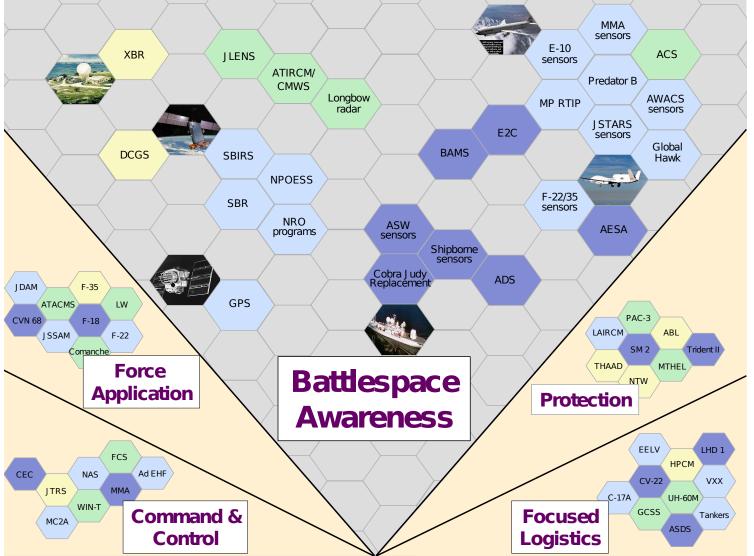
ATIRCM/CMWS, PAC -3, Chem Demil Capabilities that defend forces and U.S. territory from harm. Includes missile defense and infrastructure protection and other capabilities that defend forces and U.S. territory from harm.

#### Focused Logistics

LPD-17, C-130, CH-47, H-1 Upgrades, GCSS, TAKE, T-45 Training System, 47, C-5 RERP, FMTV, V-22, MH 60 Capabilities to deploy, redeploy, and sustain forces anywhere in or abovethe worldorsustained, in the ateroperations. Includes traditional mobility functions of airlift, sealift, and spacelift as well as shortaul (intraheater and battlefield) transportation. Also includes logistics C2, training, equipping, feeding, supplying, imataining and medical capabilities.

A Functional Capability View of U.S. Battlespace Awareness

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Source: Adapted from Defense Industrial Base Capabilities Study: Battlespace Awareness, 3/b6/64IP), January 2004 (www.acq.osd/ip)